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(54) **METHOD AND SYSTEM FOR PROVIDING A PREDEACTIVATION WARNING IN A SYSTEM HAVING A CONDITIONAL ACCESS AUTHORIZATION EXPIRATION IN A MOBILE RECEIVING DEVICE**

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G06F 15/16 (2006.01)

(52) **U.S. Cl.** **380/212**; 726/4; 705/44; 725/86; 725/87; 725/62; 725/63; 709/201; 709/231

(58) **Field of Classification Search** ..... None
See application file for complete search history.

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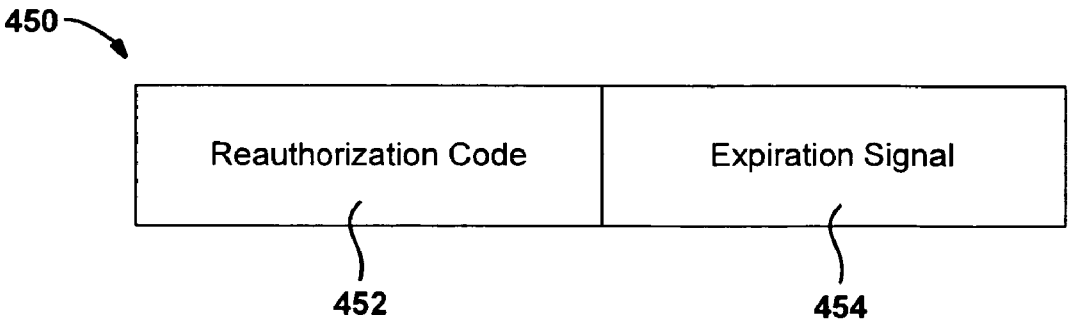
Primary Examiner — Syed A. Zia
Assistant Examiner — Trang Doan

(57) **ABSTRACT**

A system and method for providing conditional access authorizations in a satellite-receiving system includes generating a conditional access authorization signal and an expiration signal at a head-end **20**, receiving the conditional access authorization signal at a fixed satellite receiver **54** or at a mobile satellite receiver **28**. When the mobile satellite receiver operates in a predetermined time window before the expiration time, which is determined from the expiration signal, a warning **434** on a screen display **432** is generated.

10 Claims, 7 Drawing Sheets



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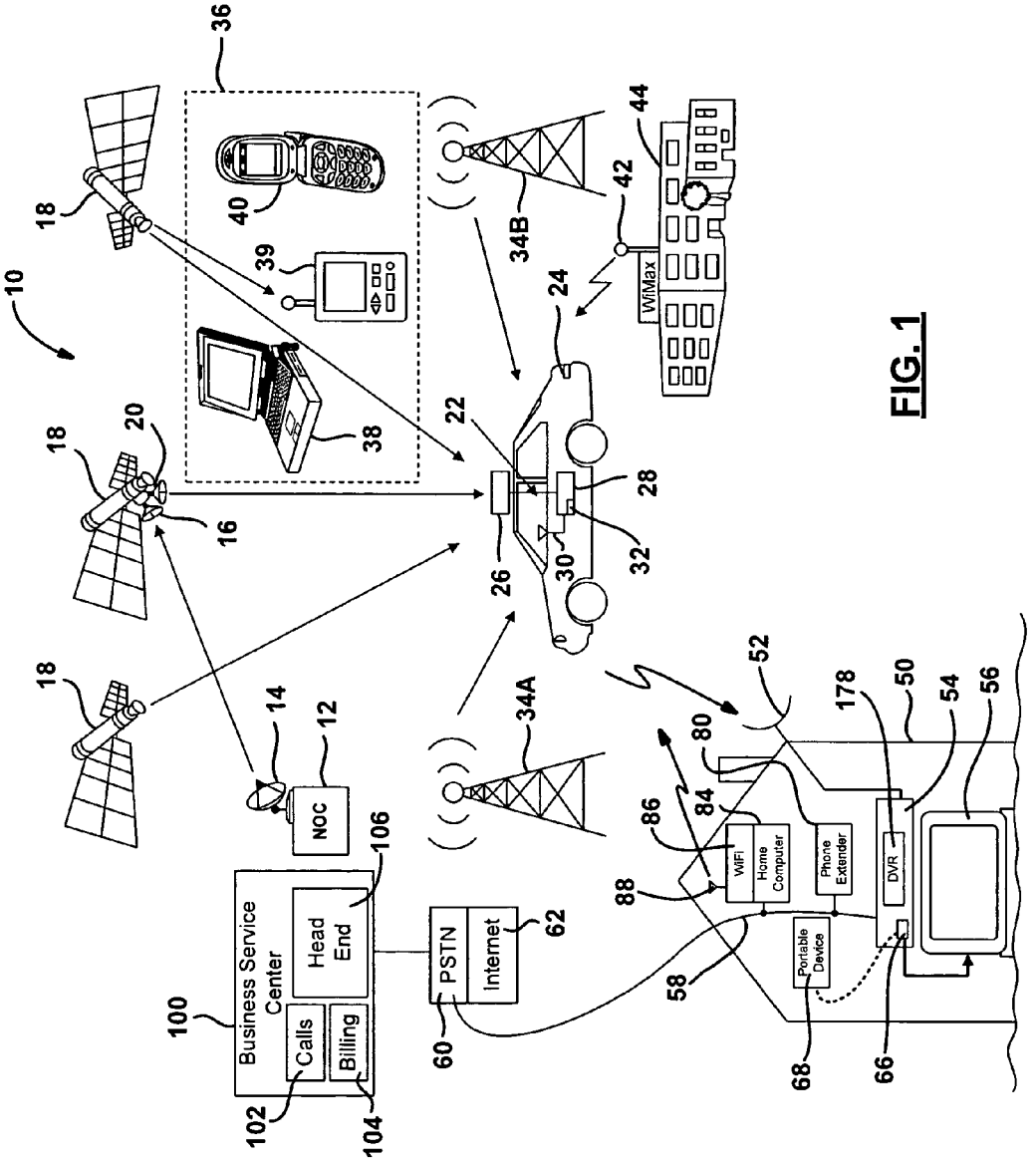
10
12
14
16
18
20
22
24
26
28
30
32
34A
34B
36
38
39
40
42
44
52
54
56
58
60
62
66
68
80
84
86
88
100
102
104
106
178
NOC
Business Service Center
Calls
Billing
Head End
PSTN
Internet
WiMax
WiFi
Home Computer
Phone Extender
Portable Device
DVR

FIG. 1

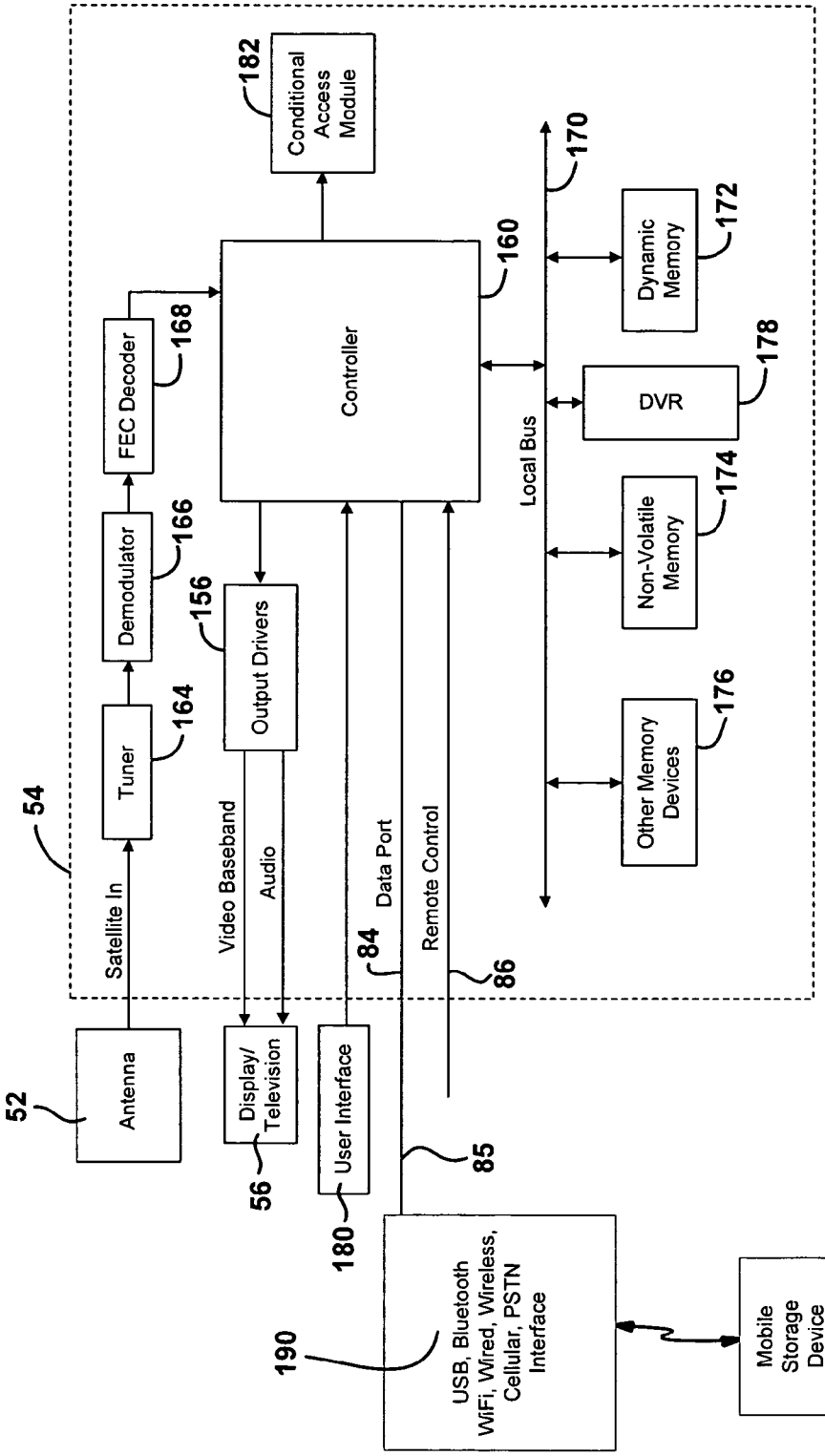
54
Satellite In
Tuner
164
Demodulator
166
FEC Decoder
168
Conditional Access Module
182
Controller
160
Output Drivers
156
Video Baseband
Audio
Data Port
Remote Control
84
86
Local Bus
170
Dynamic Memory
172
DVR
178
Non-Volatile Memory
174
Other Memory Devices
176
Antenna
52
Display/ Television
56
User Interface
180
85
USB, Bluetooth WiFi, Wired, Wireless, Cellular, PSTN Interface
190
Mobile Storage Device
192

FIG. 2

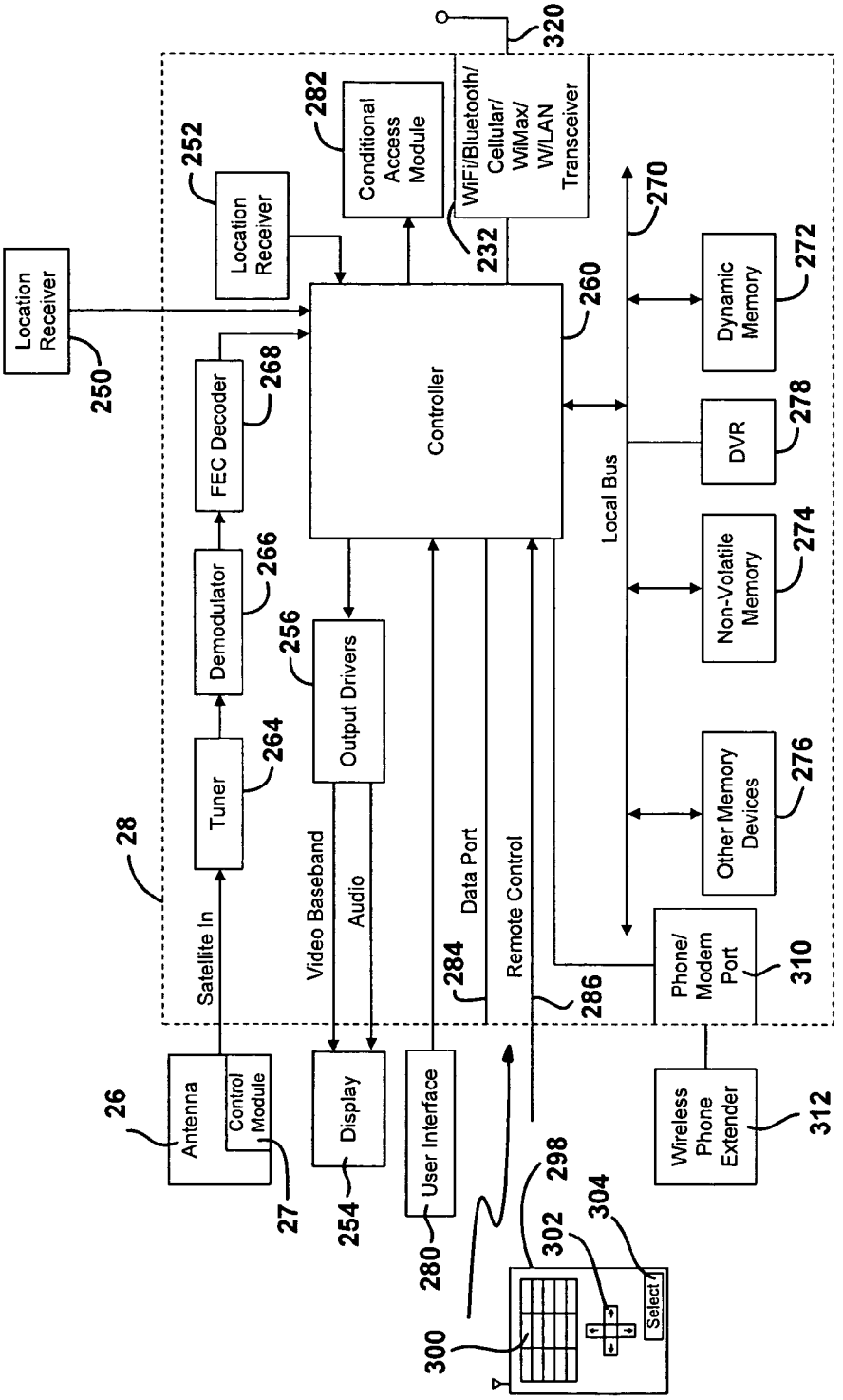
Location Receiver
250
Location Receiver
252
Conditional Access Module
282
WiFi/Bluetooth/ Cellular/ WiMax/ W/LAN Transceiver
320
232
Controller
260
270
Dynamic Memory
272
FEC Decoder
268
DVR
278
Demodulator
266
Local Bus
Non-Volatile Memory
274
Output Drivers
256
Tuner
264
Other Memory Devices
276
28
Satellite In
Video Baseband
Audio
Data Port
Remote Control
284
286
Phone/ Modem Port
310
Antenna
Control Module
26
27
Display
254
User Interface
280
Wireless Phone Extender
312
298
302
304
300
Select

FIG. 3

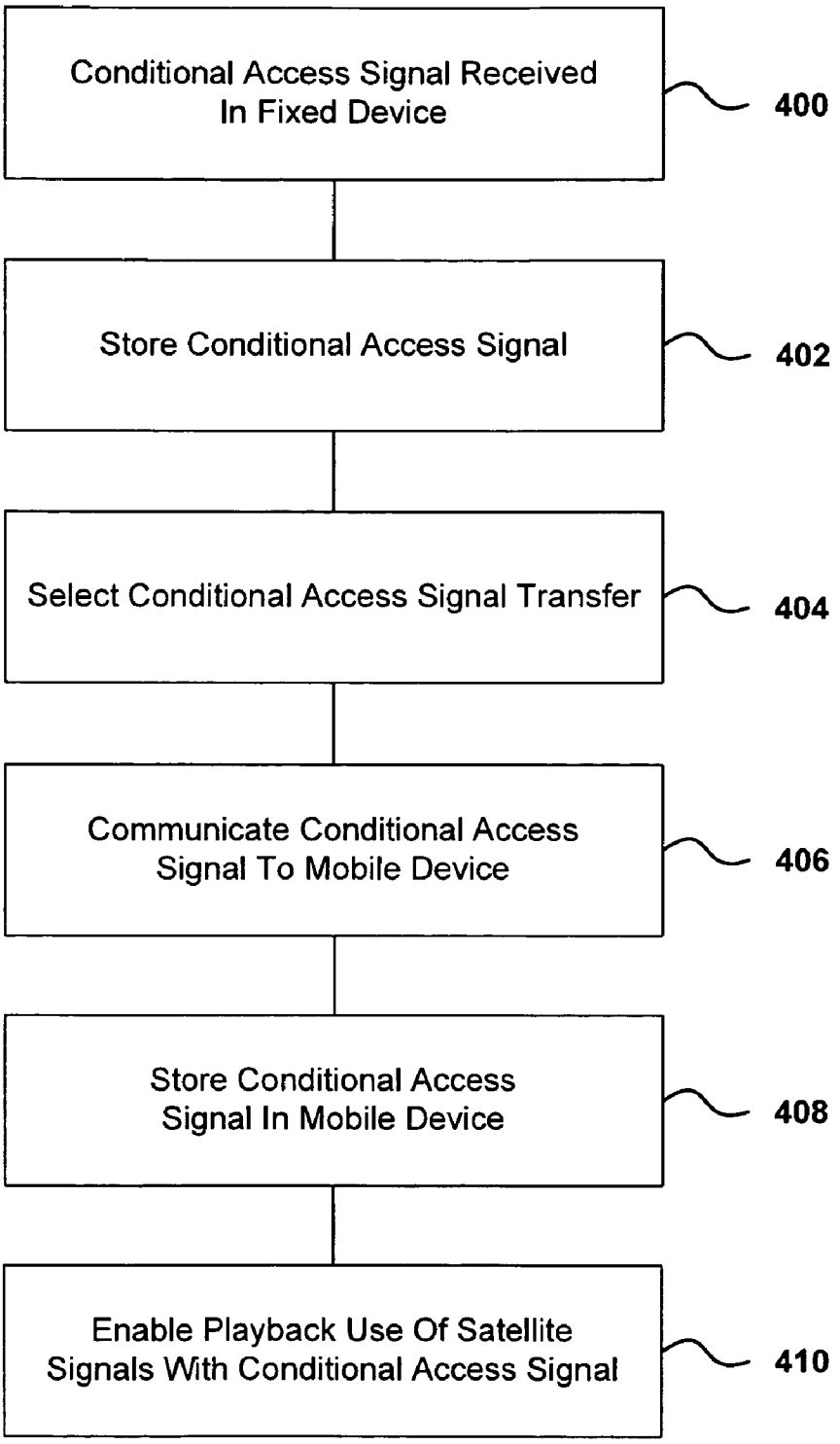
Conditional Access Signal Received In Fixed Device
400
Store Conditional Access Signal
402
Select Conditional Access Signal Transfer
404
Communicate Conditional Access Signal To Mobile Device
406
Store Conditional Access Signal In Mobile Device
408
Enable Playback Use Of Satellite Signals With Conditional Access Signal
410

FIG. 4

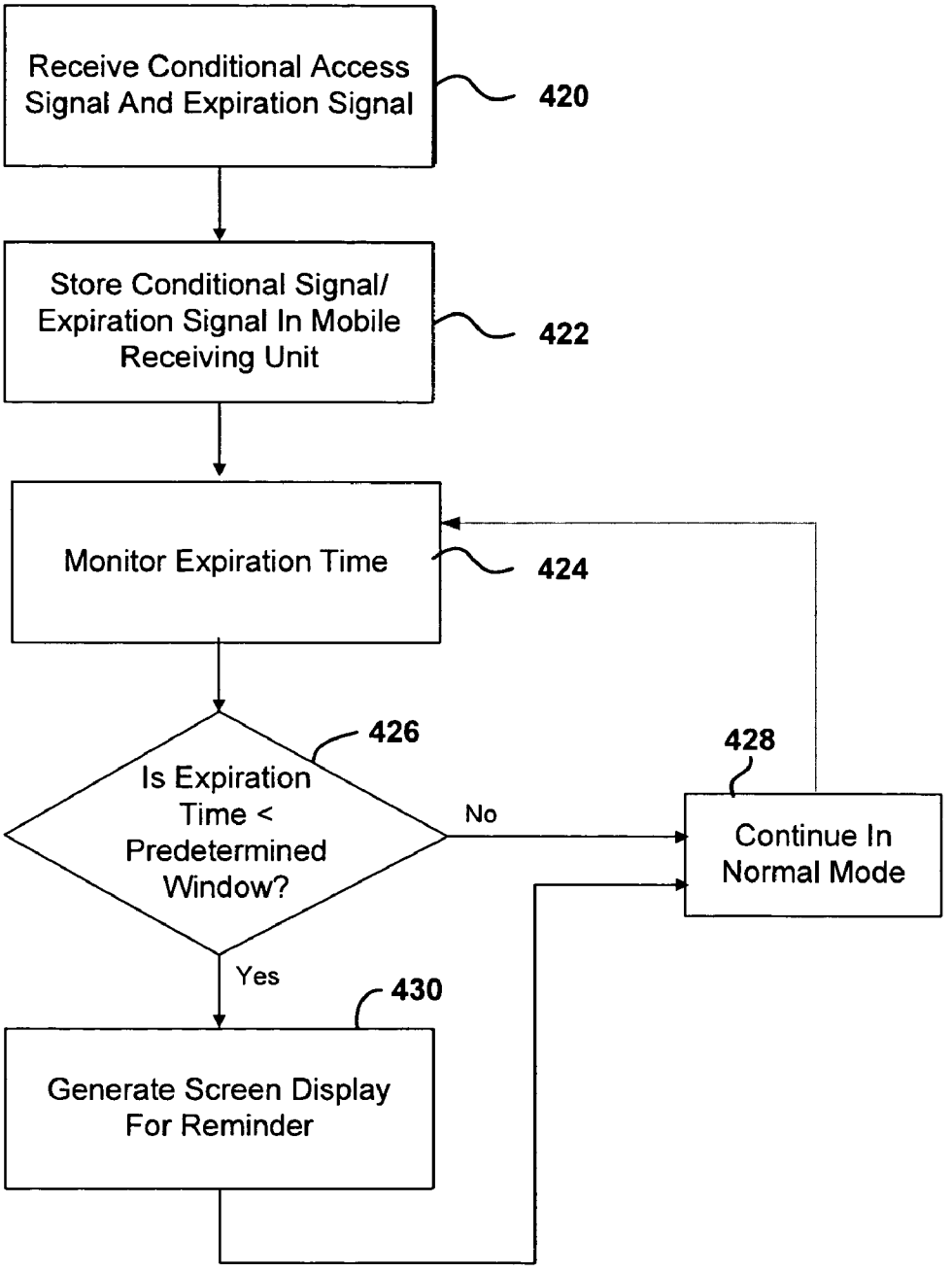
Receive Conditional Access Signal And Expiration Signal
420
Store Conditional Signal/ Expiration Signal In Mobile Receiving Unit
422
Monitor Expiration Time
424
426
Is Expiration Time < Predetermined Window?
No
428
Continue In Normal Mode
Yes
430
Generate Screen Display For Reminder

FIG. 5

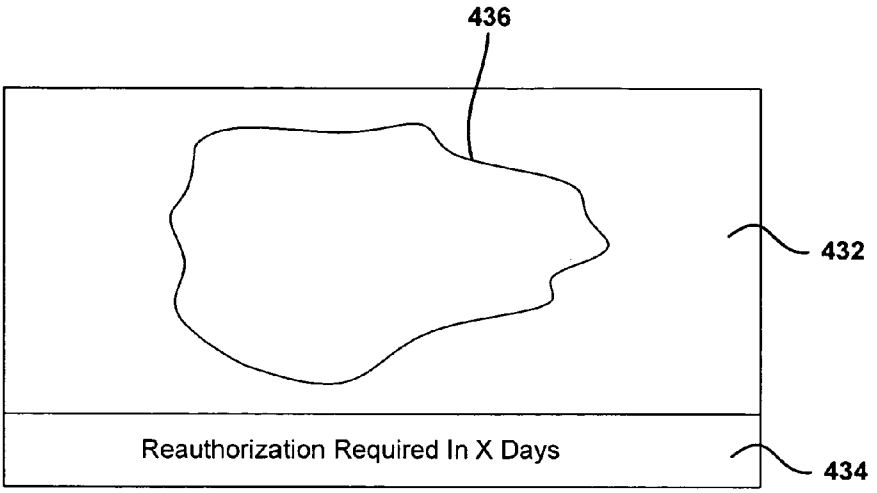
436
432
Reauthorization Required In X Days
434

FIG. 6

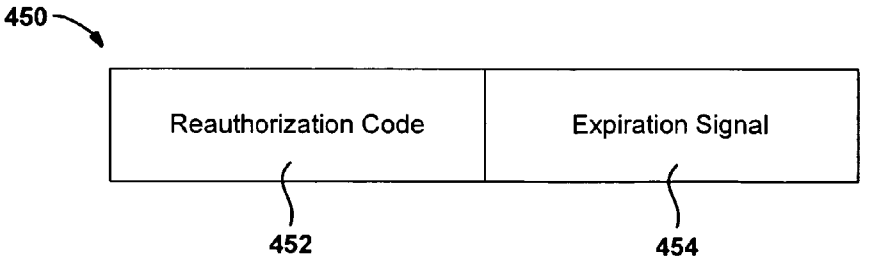
450
Reauthorization Code
Expiration Signal
452
454

FIG. 7

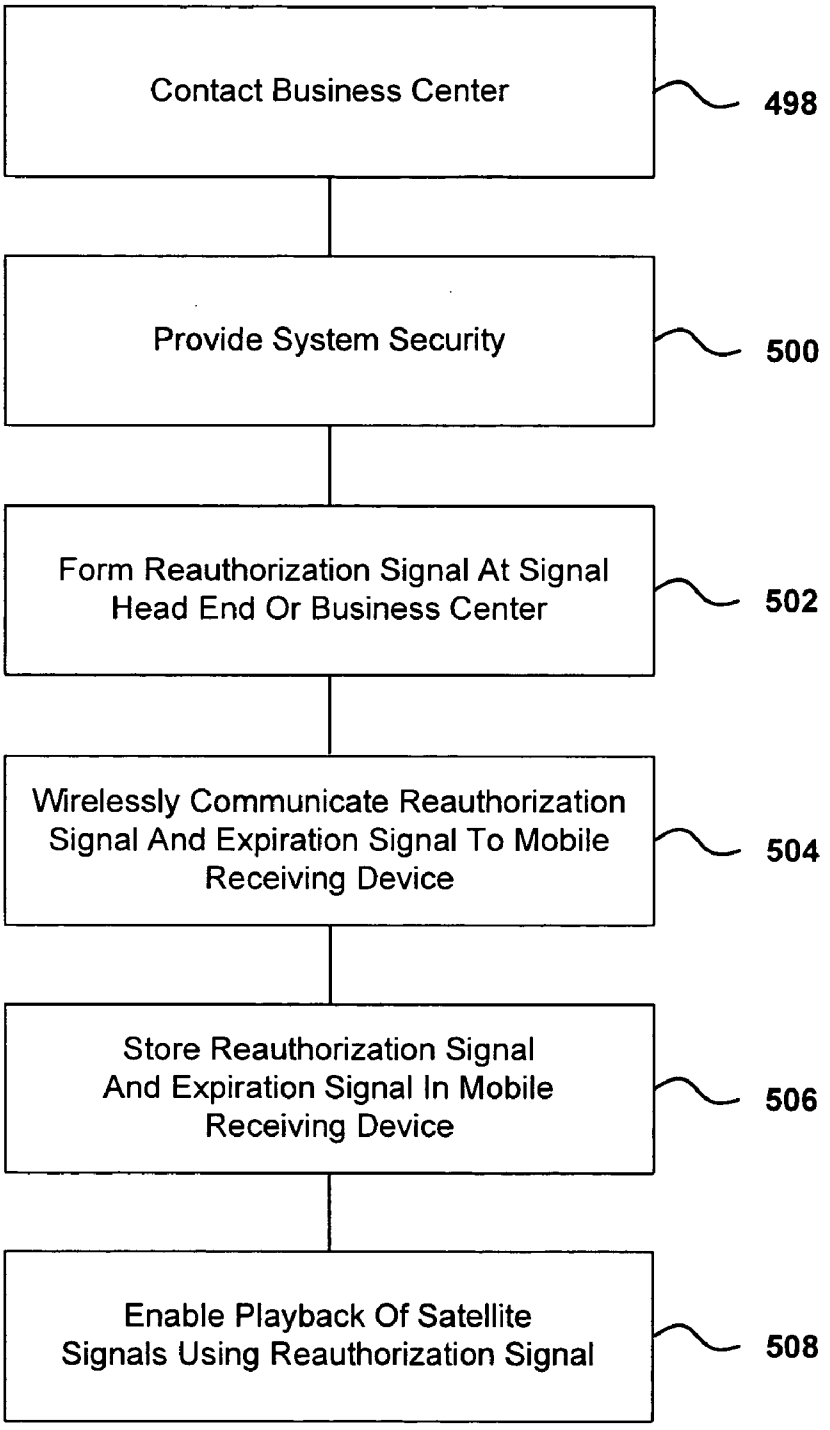
Contact Business Center
498
Provide System Security
500
Form Reauthorization Signal At Signal Head End Or Business Center
502
Wirelessly Communicate Reauthorization Signal And Expiration Signal To Mobile Receiving Device
504
Store Reauthorization Signal And Expiration Signal In Mobile Receiving Device
506
Enable Playback Of Satellite Signals Using Reauthorization Signal
508

FIG. 8

METHOD AND SYSTEM FOR PROVIDING A PREDEACTIVATION WARNING IN A SYSTEM HAVING A CONDITIONAL ACCESS AUTHORIZATION EXPIRATION IN A MOBILE RECEIVING DEVICE

TECHNICAL FIELD

The present disclosure relates generally to a mobile satellite receiving devices, and, more specifically, to a method and system to provide a warning before conditional access authorization expires in a mobile receiving device.

BACKGROUND

Satellite television has become increasingly popular due to its wide variety of programming. Entertainment in automobiles such as DVD players has also become increasingly popular. It would be desirable to provide a satellite television system for a vehicle so that the wide variety of programming may be enjoyed by the rear passengers.

Typical satellite systems include a receiving device that is used to receive satellite signals from the satellites and convert them to a usable format for playback on a television or monitor. Conditional access in conventional home-based systems is granted via a satellite transmission or through a telephone wire coupled to the satellite receiving device. Conditional access packets (CAPs) grant the user rights to view the satellite signal content. The authorization signals expire after a time period and must again be received to continue viewing or using the satellite signals.

In current stationary DIRECTV systems conditional access authorization is granted for a predetermined amount of time and then extended by a reauthorization signal sometimes referred to as reauthorization CAPs. Because the system is always connected the reauthorization CAP is received before the authorization expires. In a mobile device, the system will be powered up and down. The power down period may be significant and thus the reauthorization CAPs may be missed.

It would therefore be desirable to provide a system and method for allowing a warning to the user of the nearing expiration of the conditional access authorization for a mobile receiving device.

SUMMARY

One feature of the disclosure sets forth a method that includes communicating a conditional access authorization signal and an expiration signal to a mobile playback device. The expiration signal may include a date and time of expiration. The method further includes storing the conditional access authorization signal and the expiration signal in a mobile satellite receiver, enabling the use of the satellite signal by the mobile satellite receiver in response to the conditional access authorization signal and, when the expiration signal is within a time window from an expiration time, generating a screen display corresponding to a reauthorization warning.

In a further aspect of the invention a method includes communicating a conditional access authorization signal and an expiration signal to a mobile playback device, storing the conditional access authorization signal and the expiration signal in a mobile satellite receiver, enabling the use of the satellite signals by the mobile receiver in response to the conditional access authorization signal, when the current time is within a time window from an expiration time, generating a screen display corresponding to a reauthorization warning, contacting a business center, providing identifying information to the business center, communicating a reauthorization signal and a second expiration signal to the mobile receiving device, storing the reauthorization signal and the second expiration signal in the mobile satellite receiver and, enabling use of the satellite signals by the mobile receiver in response to the reauthorization signal and the second expiration signal.

In yet another aspect of the invention, a system comprises a business center communicating a conditional access authorization signal and an expiration signal. A display and a mobile receiver coupled to the display receive the conditional access authorization signal and the expiration signal corresponding to an expiration time. The mobile receiver enables the use of the satellite signal in response to the conditional access authorization signal. When the mobile receiver operates in a pre-determined time window before the expiration time, a warning on the display is generated.

One advantage of the system is that various technologies or multiple technologies may be used to provide the conditional access.

Other advantages and features of the present invention will become apparent when viewed in light of the detailed description of the preferred embodiment when taken in conjunction with the attached drawings and appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a system level view of a satellite broadcasting system according to the present invention.

FIG. **2** is a block diagrammatic view of a home-based receiving system according to the present invention.

FIG. **3** is a block diagrammatic view of a mobile receiving system according to the present invention.

FIG. **4** is a flow chart illustrating one method for operating the present invention.

FIG. **5** is a flow chart illustrating a second method for operating the present invention.

FIG. **6** is a front view of a screen display according to one aspect of the disclosure.

FIG. **7** is a diagram of a reauthorization and expiration signal according to one embodiment of the invention.

FIG. **8** is a flow chart illustrating a third method for operating the present invention.

DETAILED DESCRIPTION

In the following figures the same reference numerals will be used for the same components. The following figures are described with respect to a mobile satellite television system. However, those skilled in the art will recognize the teachings of the present invention may be applied to various types of mobile reception including land-based type systems. The present invention may be implemented using various types of electronic devices. Thus, the present invention not only relates to mobile satellite television receiving devices, but to non-mobile applications and other electronic devices.

Referring now to FIG. **1**, a satellite television broadcasting system **10** is illustrated. The satellite television broadcasting system **10** includes a network operations center **12** that generates wireless signals through a transmitting antenna **14** which are received by a receiving antenna **16** of a satellite **18**. The wireless signals, for example, may be digital. A transmitting antenna **20** generates signals directed to various receiving systems including stationary systems such as those in the home as well as mobile receiving systems **22**. The wireless signals may have various types of information associated

with them including location information. The wireless signals may also have various video and audio information associated therewith. As illustrated, the mobile receiving system **22** is disposed within an automotive vehicle **24**. A mobile receiving antenna **26** receives the wireless signals from the satellite **18** and processes the signals in a mobile receiving unit **28**. The mobile receiving unit **28** may be similar a set top box or an integrated receiver decoder and will be further described below. The mobile receiving unit **28** may also include a separate antenna **30** and a receiver **32** for receiving various content from a home-based system, as will be described below. Antenna **30** may also be used to transmit content such as a call back as well.

The system may also be used for displaying various wireless information on a personal mobile device **36** such as a dedicated satellite television device, a laptop computer **38**, a personal digital assistant **39**, and a cellular telephone **40**. It should be noted that these devices and the automotive-based devices may also receive wireless signals having various types of information associated therewith from the cellular towers **34**A and **34**B. Other types of information may be broadcast from various other types of broadcasting areas such as an antenna **42** on a building **44**. The building **44** may be various types of buildings such as a store and the wireless information transmitted from the antenna **42** may be advertising information. WiMax is one example of a suitable protocol. All of the wireless signals preferably include location information transmitted therewith. As will be described below, the information may be coded digitally into the signals. Thus, by reviewing the location information, signals appropriate for the location of the mobile devices may be displayed on the various devices.

A building or home **50** is illustrated having a fixed antenna **52**. The fixed antenna **52** is coupled to a receiving unit **54**. The receiving device **54** may also be referred to as an integrated receiver decoder. The receiving device **54** receives the satellite signals through the antenna **52** and converts them into audio and video files or streaming content to be played on television monitor **57**. The receiving unit may include a digital video recorder **178**. Often times, the receiving device **54** may be coupled to a telephone line **58** which in turn is coupled to the public switched telephone network (PSTN) **60** and which may also be coupled to the Internet **62**. The telephone line may be used to grant conditional access and provide a means to place call-backs from the receiving device. The receiving device **54** may also include a transmitter **66** that is used to communicate with a portable device **68**. As will be described below, signals received during callbacks including conditional access authorization signals from the receiving device **54** may be transferred through the transmitter **66** to the portable device **68** so that it may be used by the mobile receiving unit **28**. Call-back information may be sent from the portable device in a reverse manner. The transmitter **66** may be an RF infrared, Bluetooth, WiFi, WiMax or WiMax mobile transmitter. It should be noted that the transmitter **66** may be a wireless or wired connection to the portable device **68**.

As is mentioned above, the receiving device **54** may be coupled to a phone line **58**. This allows another method for file transfers and call-backs such as a conditional access authorization signals from the receiving device **54** to the receiving device **28** and vice versa. A signal may be exchanged using a wireless phone extender **80**. The wireless phone extender **80** generates over-the-air signals that may be received through the antenna **30** of the receiving device **28**.

A home computer **84** may also be coupled to the phone wire **58**. In this example, the phone wire may also be a cable wire. By coupling the home computer **84** to the receiving device **54**, various actions may be controlled such as a signal or file transfer from the receiving device **54** to the mobile receiving device **28** through a particular protocol or network such as a WiFi network **86**. The WiFi network **86** may generate signals through antenna **88**. Various frequencies may be used in the WiFi network.

A central location such as a business service center **100** may be coupled to the public switched telephone network (PSTN) **60**. The business service center **100** is typically used in a DirecTV-type system for billing, Pay-Per-View and interactive programming. The business center **100** may receive calls **102** and provide billing services **104**. The business service center **100** may also act as a head end **106** coupled to network operation center **12**. The business service center **100** may allow household keys to be stored on the receiving device **54**. A second household key may be provided to the receiving device **28**. When content is transferred from the home-based receiving device **54** to the mobile receiving device **28**, the keys must match to allow playback. Typically content is encrypted with keys such that there is a strong binding between being able to play the content and having the correct matching key to decrypt the content. Thus, only mobile receivers **28** belonging to the customers of the home-based receiving device **54** are allowed playback of the particular audio and video files. The business center **100** or head end **106** may receive call-back signals allow authorizations to view pay per view, for interactive services, for gaming and the like. The business center **100** or head end **106** may also provide call in to grant authorizations and provide the system with other information signals.

Referring now to FIG. **2**, a receiving device **54** is illustrated in further detail. Although a particular configuration of the receiving device **54** is illustrated, it is merely representative of various electronic devices with internal controllers that may be used as a receiving device. Antenna **52** may be various types of antennas having various numbers of low noise blocks. The antenna **52** may be a single antenna used for satellite television reception. The antenna **52** may also be an electronic antenna separate or integral with the device.

A display **56** such as a television may be coupled to or in communication with the receiving device **54**. The display **56** may include output drivers **156** used for generating the desired audio and video outputs suitable for the particular display **56**.

A controller **160** may be a general processor such as a microprocessor. The controller **160** may be used to coordinate and control the various functions of the receiving unit **54**. These functions may include a tuner **164**, a demodulator **166**, a forward error correction decoder **168** and any buffers and other functions. The tuner **164** receives the signal or data from the individual channel. The demodulator **166** demodulates the signal or data to form a demodulated signal or data. The decoder **168** decodes the demodulated signal to form decoded data or a decoded signal. The controller **160** may be similar to that found in current DirecTV set top boxes which employ a chip-based multifunctional controller.

The controller **160** may include or be coupled to a local bus **170**. The local bus **170** may be used to couple a dynamic memory **172** such as RAM which changes often and whose contents may be lost upon the interruption of power or boot up. The bus **170** may also be coupled to a non-volatile memory **174**. The non-volatile memory may be an in-circuit programmable type memory. One example of a non-volatile memory is an EEPROM. One specific type of EEPROM is flash memory. Flash memory is suitable since it is sectored into blocks of data segments that may be individually erased and rewritten.

Other memory devices **176** may also be coupled to local bus **170**. The other memory devices may include other types of dynamic memory, non-volatile memory, or may include such devices such as a hard drive or a digital video recorder (DVR) **178**. The display **56** may be changed under the control of controller **160** in response to the data in the dynamic memory **172** or non-volatile memory **174**. The DVR **178** may store various audio and video files to be transferred.

The controller **160** may also be coupled to a user interface **180**. User interface **180** may be various types of user interfaces such as a keyboard, push buttons, a touch screen, a voice activated interface, or the like. User interface **180** may be used to select a channel, select various information, change the volume, change the display appearance, or other functions. The user interface **180** is illustrated as part of the mobile receiving unit. However, should the unit be incorporated into a vehicle, the user interface **180** may be located external to the mobile receiving unit such as dial buttons, voice activated system, or the like incorporated into the vehicle and interfacing with the mobile receiving unit.

A conditional access module **182** (CAM) may also be incorporated into the mobile receiving unit. Conditional access modules (CAMs) are typically found in DirecTV units in the form of access cards. The access card **182** may provide conditional access to various channels and wireless signals generated by the system. Not having an access card or not having an up-to-date access card **182** may prevent the user from receiving or displaying various wireless content from the system.

FIG. **2** also shows an interface **190**. The interface **190** may be external to the receiver **54** or internal to the receiver **54**. The interface **190** may include the functions of the transmitter **66** illustrated in FIG. **1**. The interface **190** is used to communicate files stored within the memory of receiver **54** to the mobile receiver **28**. This may be done directly through a WiFi, WiMax, WiMax mobile, wireless, cellular or other communication directly to the mobile receiver **28**.

The interface **190** may also be coupled to a mobile storage device **192**. The mobile storage device **192** receives files for transfer to the mobile receiving unit **28**. The mobile storage device **192** may be a simple memory that is coupled to the interface **192** through a USB-type port. Of course, other types of ports or protocols may be used to couple a memory thereto. Other types of devices include a portable hard disk drive, a portable chip-based system, or the like. The files loaded on to the mobile storage device may include the household key for security.

The interface **190** may also include the function of a wireless phone extender or a cellular phone transmitter.

Referring now to FIG. **3**, the mobile receiving unit **28** is illustrated in further detail. Although a particular configuration of the receiving unit **28** is illustrated, it is merely representative of various electronic devices with internal controllers. Antenna **26** may be various types of antennas including a rotating antenna which is used to track the relative movement of the satellite or other transponding device with respect to the vehicle. The antenna **26** may be a single antenna used for satellite television reception, or a number of antennas such as one for receiving television signals and one coupled to a location receiver **250** such as GPS receiver. The antenna **26** may also be an electronic antenna such as a phased array or a panel antenna. The antenna **26** may include an internal controller **27** that controls the operation of the antenna **26**.

The mobile receiver unit **28** may be coupled to antenna **26** with a two-way communication channel such as a wire or a wireless system. The mobile receiving unit **28** may also include a location receiver **252** integrated therein. The location receiver **252** may be a GPS receiver. In a preferred embodiment, only one location receiver **250**, **252** may be provided in the system. However, the location receiver **250**, **252** may be part of the vehicle **24** or may be part of the mobile receiving system **22**, **36**. The controller **260** may be coupled directly to location receiver **252** and/or location receiver **250**. The mobile receiving unit **28** includes a display **254**. The display **254** may be incorporated into the device **28** or within the vehicle **24**. The display **254** may include output drivers **256** used for generating the desired audio and video outputs suitable for the particular display **254**.

A controller **260** may be a general processor such as a microprocessor. The controller **260** may be used to coordinate and control the various functions of the receiving unit **28**. These functions may include a tuner **264**, a demodulator **266**, a forward error correction decoder **268** and any buffers and other functions. The tuner **264** receives the signal or data from the individual channel. The demodulator **266** demodulates the signal or data to form a demodulated signal or data. The decoder **268** decodes the demodulated signal to form decoded data or a decoded signal. The controller **260** may be similar to that found in current DirecTV set top boxes that employ a chip-based multifunctional controller.

The controller **260** may include or be coupled to a local bus **70**. The local bus **270** may be used to couple a dynamic memory **272** such as RAM that changes often and whose contents may be lost upon the interruption of power or boot up. The bus **270** may also be coupled to a non-volatile memory **274**. The non-volatile memory may be an in-circuit programmable type memory. One example of a non-volatile memory is an EEPROM. One specific type of EEPROM is flash memory. Flash memory is suitable since it is sectored into blocks of data segments that may be individually erased and rewritten.

Other memory devices **276** may also be coupled to local bus **270**. The other memory devices may include other types of dynamic memory, non-volatile memory, or may include such devices such as a hard disc or a digital video recorder **278**. The display **254** may be changed under the control of controller **260** in response to the data in the dynamic memory **272**, non-volatile memory **274** or a DVR **278**.

The controller **260** may also be coupled to a user interface **280**. User interface **280** may be various types of user interfaces such as a keyboard, push buttons, a touch screen, a voice activated interface, or the like. User interface **280** may be used to select a channel, select various information, change the volume, change the display appearance, or other functions. The user interface **280** is illustrated as part of the mobile receiving unit. However, should the unit be incorporated into a vehicle, the user interface **280** may be located external to the mobile receiving unit such as dial buttons, voice activated system, or the like incorporated into the vehicle and interfacing with the mobile receiving unit.

One example of a user interface **280** is a remote control device **298** having a key pad **300**, an arrow key pad **302**, and a select button **304**. Inputs to the receiver **28** may be provided by the remote control device **298** or through another type of user interface **280**.

A conditional access module **282** (CAM) may also be incorporated into the mobile receiving unit. Conditional access modules (CAMs) are typically found in DirecTV units in the form of access cards. The access card **282** may provide conditional access to various channels and wireless signals generated by the system. Not having an access card or not having an up-to-date access card may prevent the user from receiving or displaying various wireless content from the system. The conditional access card **282** may require a con-

ditional access authorization signal periodically to allow the satellite signals to be used or played back.

The controller **260** may be coupled to a data port **284** that is used to send or receive data and a remote control input **286** for receiving data from a wired or wireless remote control device.

Controller **260** may be coupled to a wireless or wired modem port **310**. The wireless or wired phone/modem port may be coupled to a wireless phone extender **312**. The wireless phone extender **312** is used to communicate with the interface **190** in the home-based receiver unit **54**.

Controller **260** may also be coupled to an interface **232** that may include an antenna **320**. The interface **232** may include a WiFi, WiMax, Bluetooth, cellular, wireless LAN, or the like. Signals and files received through the interface **32** may be stored on the DVR **278** for eventual playback and display on the display **254**.

Referring now to FIG. **4**, a method of granting conditional access is set forth. In step **400**, a conditional access authorization signals having data therein is received in a home or fixed receiving device **54**.

In step **402**, conditional access authorization signals from are stored on a first receiving device such as a home-based receiving device.

A conditional access authorization signal may be transferred by selecting from a menu or the like in step **404**. The menu may, for example, be an on-screen-type menu listing the conditional access authorization signal to transfer. This could also be an automated process that is periodically performed. Upon selection by a user interface, the conditional access authorization signal may be communicated to the mobile receiving device in step **406**. The conditional access authorization signal may be communicated in a various number of manners including using an intermediate mobile storage device **192** illustrated in FIG. **2**. Various types of devices may be used for the transfer including wired and non-wired transfers through an interface. For a mobile storage device **192**, a USB connection may be used. Wireless transfer may include a Bluetooth, WiFi, WiMax, WiMax mobile, wired, wireless, cellular phone or wireless phone. Of course, the wireless methods for transferring may include wirelessly transferring files to the mobile storage device **192**.

Communicating the conditional access authorization signal in step **406** may also include storing the signal in a memory in the mobile receiving device.

In step **408**, the conditional access authorization signal is stored in the mobile receiving/playback device. In step **410** a satellite signal is received and played or otherwise used in the mobile receiving device with the proper conditional access authorization signal. Playback may include using a display such as a television or an audio system in a vehicle. Step **410** may also include comparing authorizations or a household key to the stored household key. As mentioned above, the keys are used to encrypt and decrypt the content. Thus, playback or other use of the satellite signals may be disabled if the household key or the conditional access authorization signals do not match the household key.

The above method may also be used for any signal sent to the receiver, not just for conditional access authorization signals.

Referring now to FIG. **5**, a method of operating a mobile receiving device is set forth. In step **420**, a conditional access authorization signal and an expiration signal are received at the mobile unit. The expiration signal may include a date and time of expiration. In step **422**, the conditional access authorization signal and the expiration signal are stored in the mobile unit and stored in a memory within the mobile unit. Of course, those skilled in the art will recognize that the memory may be housed within the mobile unit or physically housed on a conditional access card. In step **424**, as the mobile receiving unit operates, the current time is compared to the expiration time corresponding to the expiration signal that is stored in the memory. In step **426**, if the current time is less than a pre-determined window from an expiration time, step **428** is performed in which the operation of the mobile receiving unit is performed in a normal mode. In step **426**, if the current time is within or less than the pre-determined window, in step **430**, a screen display reminder, is generated. The screen display may also include an audible warning. The screen display generates a display that corresponds to a message indicating that reauthorization is required within a pre-determined amount of time.

Referring now to FIG. **6**, one example of a screen display **432** having a video image **436** is illustrated. Screen display **432** includes a banner **434** across the bottom thereof. In FIG. **6**, the banner reads reauthorization required in X days. The X may correspond to a various number of days or other time period before the authorization expires. Various other methods for providing a screen display may include providing a side banner, a top banner or a full-screen display. An audible warning only or audible and video warning may be provided. It is envisioned that the reauthorization banner may be displayed for a pre-determined amount of time and normal screen operation will continue after that amount of time has expired. In addition, the subscriber may be allowed to clear the banner.

Referring now to FIG. **7**, an example of a reauthorization signal **450** is illustrated. The reauthorization signal **450** may include a reauthorization code **452** that is stored in the mobile receiving device. An expiration signal **454** having an expiration time may also be generated with the reauthorization code **452**. The expiration signal **454** is also stored within the mobile receiving device.

Referring now to FIG. **8**, once the reauthorization banner is communicated to the system user, the user contacts the business center in step **498**. In step **500**, the user provides the business center with system security, such as passwords, authorization code, or other identifying information. It is envisioned that this process may take place using a voice prompt phone system, the internet or interactivity through a set top box located within the user's home. Calling an operator at a business center may also be used, where the operator enters the identifying data for the customer. It should be noted that a reauthorization signal is a conditional access authorization signal, just not the first conditional access authorization signal. In step **502**, the reauthorization signal and expiration signal is formed at the head end or business center. In step **504**, the reauthorization signal and the expiration signal is wirelessly communicated to the mobile receiving device. The reauthorization signal may be communicated directly from the head end using the various wireless technology described above. In step **506**, the reauthorization signal and the expiration signal are stored in the mobile receiving device. In step **508**, the playback of satellite signals is enabled using the reauthorization signal and the expiration signal.

As mentioned above, the method set forth in FIG. **5** may also be used for various other types of call back signals. The wireless communication may take place using a wireless network, a WiFi network, a wireless phone extender, cellular phone network, or the like.

While particular embodiments of the invention have been shown and described, numerous variations and alternate

embodiments will occur to those skilled in the art. Accordingly, it is intended that the invention be limited only in terms of the appended claims.

What is claimed is:

1. A method comprising:

communicating a conditional access authorization signal and an expiration signal to a mobile satellite receiver;

storing the conditional access authorization signal and the expiration signal in the mobile satellite receiver;

enabling use of satellite signals by the mobile satellite receiver in response to the conditional access authorization signal;

when a current time is within a time window from an expiration time determined from the expiration signal, generating a screen display corresponding to a reauthorization warning;

contacting a business center;

providing identifying information to the business center;

communicating a reauthorization signal and a second expiration signal to the mobile satellite receiver;

storing the reauthorization signal and the second expiration signal in the mobile satellite receiver; and

enabling use of the satellite signals by the mobile satellite receiver in response to the reauthorization signal and the second expiration signal.

2. A method as in claim **1** wherein communicating comprises communicating the reauthorization signal and the second expiration signal through a satellite.

3. A method as in claim **1** wherein communicating comprises wirelessly communicating the reauthorization signal and the second expiration signal through a satellite.

4. A method as in claim **3** wherein wirelessly communicating the reauthorization signal and the second expiration signal comprises communicating the reauthorization signal and the second expiration signal through a wireless network.

5. A method as in claim **3** wherein wirelessly communicating the conditional access authorization signal comprises communicating the reauthorization signal and the second expiration signal through a WiFi network.

6. A method as in claim **3** wherein wirelessly communicating the reauthorization signal and the second expiration signal comprises communicating the reauthorization signal and the second expiration signal through an extender of a wireless phone network.

7. A method as in claim **3** wherein wirelessly communicating the reauthorization signal and the second expiration signal comprises communicating the reauthorization signal and the second expiration signal through a cellular phone network.

8. A method as in claim **3** wherein communicating a reauthorization signal and a second expiration signal comprises storing the reauthorization signal and the second expiration signal on a memory device and further comprising coupling the memory device to the mobile receiver.

9. A method as in claim **1** wherein the mobile satellite receiver comprises a mobile integrated receiver decoder.

10. A method as in claim **1** further comprising generating the conditional access authorization signal and the expiration signal at a head end.

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